United States Department of the Interior
Bureau of Land Management

FISH AND WILDLIFE 2000

ANNUAL PROGRESS REPORT

FISCAL YEAR 1990

BLM Mission Statement

The Bureau of Land Management is responsible for the balanced management of the public lands and resources and their various values so that they best serve the needs of the American people.

Management is based upon the principles of multiple-use and sustained yield, a combination of uses that takes into account the long-term needs of future generations for renewable and non-renewable resources. These resources include recreation, rangeland, forest, minerals, watershed, fish and wildlife, wilderness and natural, scenic, scientific, educational and cultural values.

Cover photo by
J. Kirk Gardner, BLM

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BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C.

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"A New Era Begins"

What This Report Is

A new era arrived in May of 1987 when the Bureau of Land Management (BLM) formally adopted "Fish and Wildlife 2000 — A Plan for the Future." Implementation began in FY 1988 and was accelerated by the new BLM director, Cy Jamison.

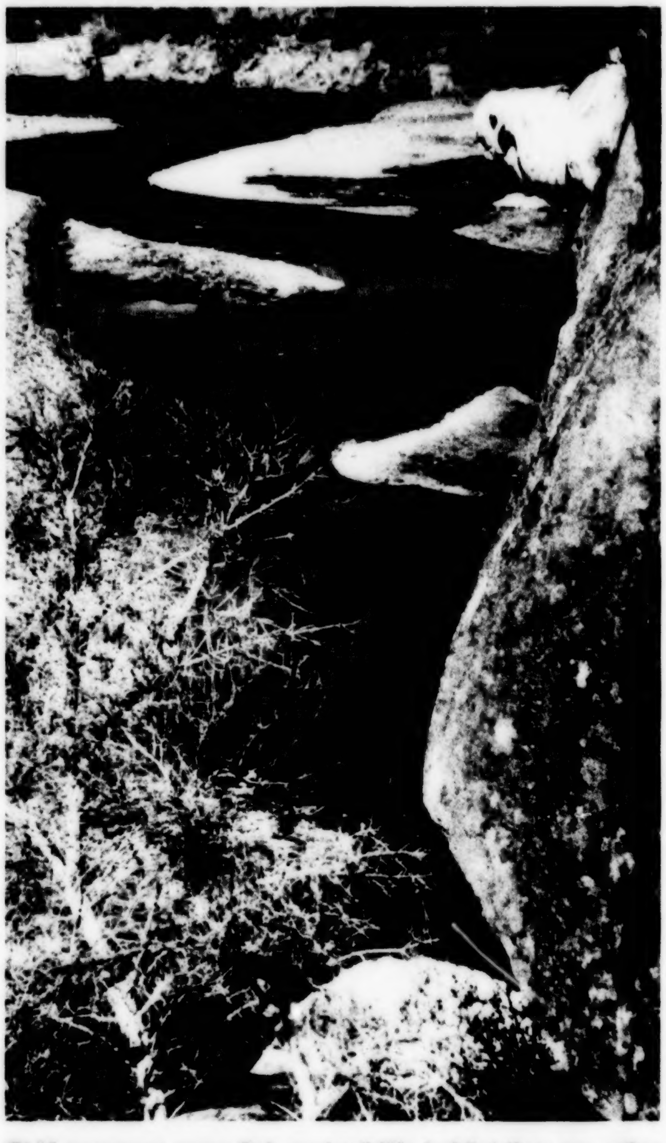
It was the first comprehensive BLM plan for its vast wildlife and fisheries resources. It provided managers with purpose and support, plus a sense of where fish and wildlife resources fit in with a multitude of other BLM resources.

But it was more than just a plan. It was also a picture and a vision — a picture of where BLM stood regarding fish and wildlife, and a vision of where the agency should be in the future.

Most important, though, "Fish and Wildlife 2000" meant a change where it counts the most — on the ground. Indeed, the effects of "Fish and Wildlife 2000" are being felt every hour of every working day on projects scattered across the 270 million acres of public land managed by BLM.

This report will tell you about some of those projects, from new bighorn sheep watering facilities in New Mexico, to blasting waterfowl habitat holes in Utah, to cooperative bald eagle studies in the Yellowstone country of Idaho and Wyoming.

It will also tell you what BLM plans to do in the future, and what resources are needed. Along the way, we hope you'll understand better that "Fish and Wildlife 2000" is no ordinary plan, but one that has changed the way BLM looks at — and manages — these valuable resources.



BLM manages more fish and wildlife habitat than any other agency. The habitat includes the scenic Box Canyon area on the Lower Gila River in New Mexico.

BLM's Fish and Wildlife Resources

When the subject is BLM's fish and wildlife resources, one word stands out: diversity.

The bighorn sheep in Arizona, the steelhead trout in Oregon, the grizzly bear in Alaska ... no other federal or state agency manages more fish and wildlife habitat than BLM. More than 3,000 species of mammals, fish, birds, reptiles and amphibians make their homes on the public lands. Look at just a few examples:

- *All native species of big game in North America can be found on BLM lands.*
- *Eighty percent of the remaining desert bighorn sheep habitat is on land administered by BLM.*
- *BLM hosts all North American native species of quail and grouse.*
- *Outstanding raptor habitat, perhaps the best in the world, is on BLM lands, including the renown Snake River Birds of Prey Area in Idaho.*
- *BLM lands have extensive habitat for salmon, trout and unusual desert fish species.*

And the list could go on. The facts speak simply and clearly: there are no other lands like those managed by BLM, and the fish and wildlife of the public lands are equally distinct.

More than ever, Americans want areas for fish and wildlife. The desire to fish, to hunt, to see wildlife, photograph it, and otherwise enjoy these natural treasures, is greater than ever. "Fish and Wildlife 2000" is the right plan at the right time, filling a growing need in our society.

There's another side to it. The business side. According to the National Survey of Hunting and Fishing published by the U.S. Fish and Wildlife Service, $10 billion was spent on fishing, hunting and nonconsumptive wildlife recreation on BLM lands last year. So good habitat for fish and wildlife not only makes biological sense, it's also a sound business investment.

Fish and Wildlife Habitat on Public Lands.

Habitat	Acres Lower 48 States	Alaska
Big game	127,889,000	78,730,000
Small game	157,826,000	80,240,000
Waterfowl,Wetlands	514,600	16,362,600
Riparian	6,563,000	7,326,609
Lakes	172,000	3,874,000
Reservoirs	192,000	0
Streams (miles)	21,000	134,000

Economic Importance of Hunting and Fishing on Public Lands.

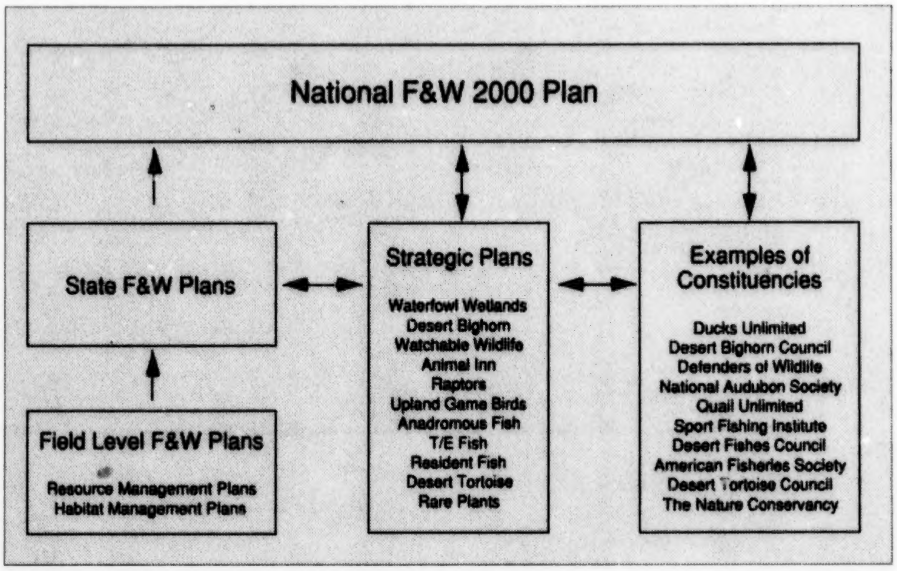
Economic Factor	Total
Number of residents who hunt[1]	2.1 million
Total hunting days[1]	38.3 million
Annual average hunting expenditures[1]	$1.973.1 billion
Average annual expenditures for non-consumptive wildlife recreation[1]	$3,285.5 billion
Total fishing days[1]	157.1 million
Expenditures[2]	$4,728.3 billion
Industrial activity (output)[2]	$7,387.3 billion
Sales tax[2]	$199.5 million
Jobs[2]	138,338
Earnings[2]	$34.0 billion
Income tax[2]	$79.9 million

Source: [1] 1985 National Survey of Fishing, Hunting and Wildlife Associated Recreation, U.S. Fish and Wildlife Service.
[2] Sport Fishing Institute, 1989.

About Fish and Wildlife 2000

This is how it all fits together.

"Fish and Wildlife 2000" sets the goals and objectives for BLM's program. Three levels of plans have been or will be developed to make those goals a reality. They are developed on the national level, the BLM state level, and the BLM field level. Taken as a whole, these plans will provide a blueprint for managing fish and wildlife resources into the 21st century and beyond.



What We're Doing

Doing is what "Fish and Wildlife 2000" is all about. Doing more field projects. Doing more with other agencies, conservation groups, outdoors organizations, and our other partners. Doing more planning to help ensure that things up and down the organizational line turn out right. And, most importantly, doing more for the habitat on public lands.

This report covers just a few of the things BLM is doing resulting from "Fish and Wildlife 2000." Our accomplishments are broken into the three components outlined in "Fish and Wildlife 2000": Wildlife Habitat Management, Fisheries Habitat Management, and Threatened and Endangered Species Management.

BLM personnel and Trout Unlimited members from Rock Springs, Wyoming, braved near-zero temperatures to help transform Bone Draw into a "nursery" stream for cutthroat, rainbow trout and kokanee salmon.

Wildlife Habitat Management Component

Goal 1 — Overall Habitat Management

"Ensure optimum populations and a natural abundance and diversity of wildlife resources on public lands by restoring, maintaining, and enhancing habitat conditions through management plans and actions integrated with other uses of public lands through coordination with other programs, the States, by management initiatives, and through direct habitat improvement projects."

Fish and wildlife improvements don't happen with a snap of the fingers and a blink of the eye. They take time. It may be five years before real improvement is noticed. Without a sustained effort and a commitment from BLM, our partners, Congress and others, habitat won't improve. Especially with fish and wildlife, it can, in some cases, be more damaging to start a project and not finish it than to not start it in the first place.

That helps explain why planning is so important. Without the eye-toward-the-future provided by planning, projects run the risk of never being completed. Planning is the glue that holds together BLM's habitat improvement work.

"Resource Management Plans" (RMPs) contain long-term objectives for large areas. They can compare fish and wildlife needs and values with other existing resource uses. They provide the framework for making land use decisions and carrying them out.

Fish and Wildlife Activity Plans are on-the-ground plans that are the building blocks for the more general goals identified in the Resource Management Plans. The Fish and Wildlife Activity Plans include Habitat Management Plans (HMPs), Coordinated Resource Management Plans (CRMPs) and Areas of Critical Environmental Concern (ACEC) plans.

Of the 395 HMPs prepared, 37 have been completed and 315 are being implemented. About $65.5 million is required to complete these HMPs, as well as to implement an additional 43 new HMPs.

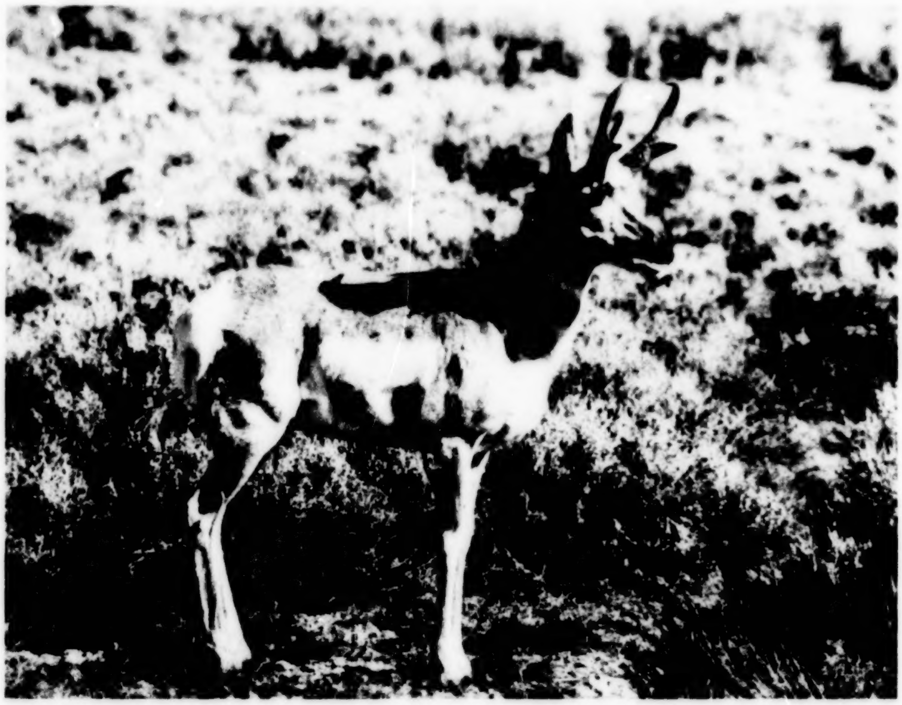
Inventorying and monitoring aren't the most glamorous parts of BLM's fish and wildlife program. But they are among the most important. Without solid data provided through inventories, baseline information isn't available. Monitoring, or documenting the changes in resources, is what enables biologists and managers to really determine what is working — and what is not.

There are many other activities that BLM is doing for overall habitat management, but we'll only highlight three more, the Sikes Act Stamp Program, Animal Inn and Watchable Wildlife.

The Sikes Act of 1974 requires BLM and states to cooperate on conservation and rehabilitation of wildlife resources on public lands. One good example of where cooperation has paid off is in parts of New Mexico, where a Sikes Act stamp program was started. Revenues from the sale of public land management stamps are used to benefit fish and wildlife on BLM lands covered by the program. Montana is conducting a trial program and several other states are interested.

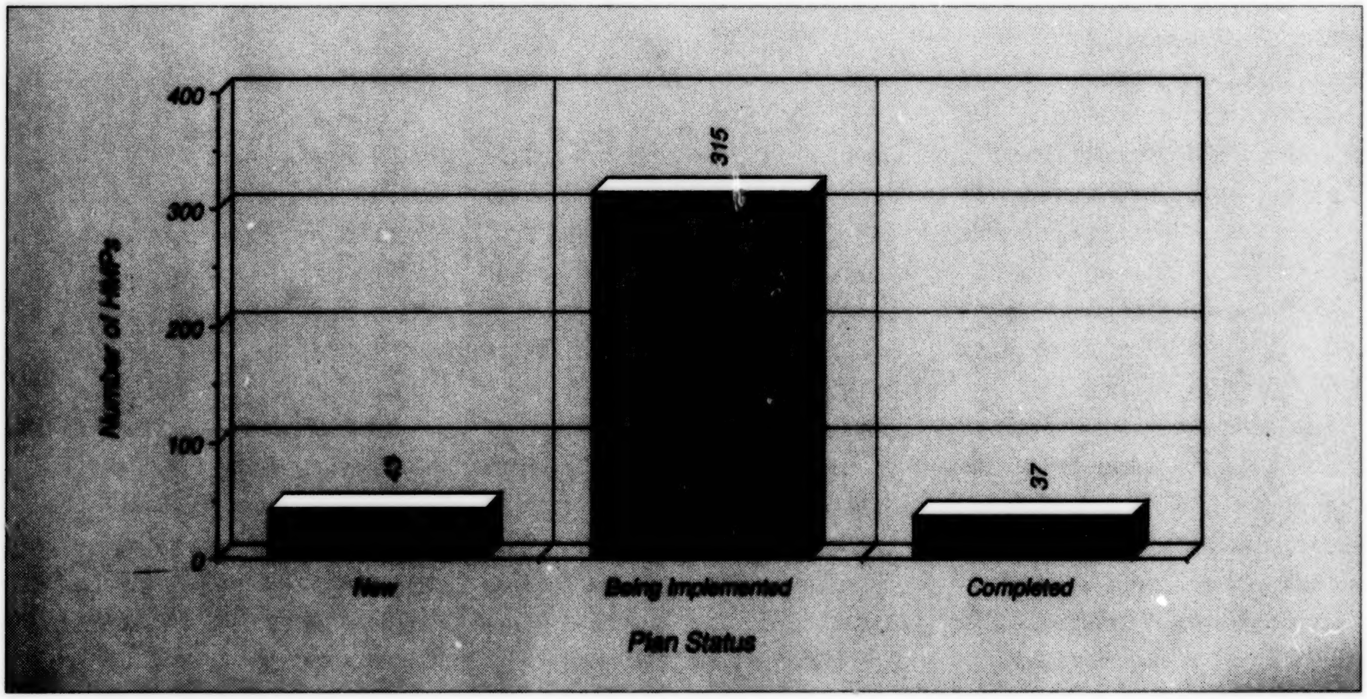
Animal Inn is an initiative to help people realize the value of standing dead wood for wildlife and fish. BLM, the U.S. Forest Service and conservation groups are working together on this innovative awareness program as a model for habitat conservation.

Watchable Wildlife is a joint initiative with BLM's recreation program, the U.S. Forest Service, other federal agencies and the Defenders of Wildlife. Good areas for viewing wildlife are identified and a state wildlife viewing guide is then published for the public. Viewing guides have recently been published in Oregon, Utah and Montana, with others in the planning stages.



Wildlife habitat improvements just don't happen. Planning is a key to improving fish and game populations on public lands.

Status of HMPs Bureauwide as of October 1988.



Source: HMP statistics data base.

Goal 2 — Big Game/Upland Game

"Ensure that big game/upland game species on the public lands are provided habitat of sufficient quantity and quality to sustain identifiable economic and/or social contributions to the American people."

Estimated Number of Big Game Animals on Public Lands.

Species	Number Lower 48 States	Alaska
Antelope	295,690	0
Bear (black, grizzly or brown)	6,314	8,700
Bison	300	420
Caribou	0	320,000
Dear (whitetail, mule)	1,449,308	0
Bighorn sheep	19,956	3,200
Elk	142,870	0
Javelina	11,900	0
Moose	3,305	40,000
Mountain goat	345	350

The desert bighorn is an example of a species that has benefitted from the guidance of "Fish and Wildlife 2000."

Check the numbers: Since 1987, 26 transplants have occurred, 64 new water developments are in place, and 17 HMPs have been completed or altered specifically for the desert bighorn.

Check what else has been done: In Arizona, 20 bighorn water developments were constructed or maintained and three transplants were completed. In the rugged Chuckwalla Mountains of southern California, 40 desert bighorns were reintroduced to augment the existing population of 80 animals. The Utah Division of Wildlife Resources credits BLM's water developments for an excellent lamb survival rates.

In addition to desert bighorn, BLM manages habitat for California, Rocky Mountain and Dall sheep. California bighorns, once extinct in the United States, have been successfully reintroduced in Idaho, Oregon and Nevada.

In Oregon, BLM teamed with the Oregon Department of Fish and Wildlife and volunteers to reintroduce 15 bighorns to the remote Coglan Buttes area in the Lakeview District and 14 more along the Lower John Day River in the Prineville District. Thirty-nine bighorn sheep were transferred from the Rawlins District's Whiskey Mountain to other parts of the state by BLM and the Wyoming Game and Fish Department.

Elk also benefited from controlled fires set by BLM in Idaho and Colorado and funded partly by the Rocky Mountain Elk Foundation. New winter forage will be more plentiful and of higher quality because of the prescribed burning.

BLM and the Utah Division of Wildlife Resources are partners in managing the only wild buffalo herd in the lower 48 states. The herd ranges over the steep, rough terrain of the Henry Mountains in southern Utah. The herd size is controlled by an annual hunt. Monitoring is done each spring by

"A Job I Like"

ElRoy Taylor of BLM's Boise District earns part of his salary as a mugger and has no qualms at all about it.

"It's a part of the job I like," he says.

Taylor's targets aren't the usual prey sought by muggers. They're California bighorn sheep, and his role is vital to a successful transplant of the animal. Taylor, a wildlife biologist who specializes in bighorns, is part of a "mugging" team that jumps from a helicopter and brings sheep to the ground in order to prepare them for transplanting.

(Continued on next page)

"Once the blindfold is on," says BLM wildlife biologist and bighorn sheep mugger ElRoy Taylor, "they settle right down."

volunteers, state and agency personnel, and the livestock permittees.

Monitoring is a key in managing caribou in Alaska. Radio collars are on caribou in the Steese, Western Arctic and Ray Mountains herds. The radio signals help BLM to determine migration routes, calving grounds, insect-relief areas and mortality rates. Enough data is now on hand to give a pretty clear picture of the caribou herds' life cycle in northern Alaska.

BLM's work under "Fish and Wildlife 2000" isn't confined to big game populations. Take upland game birds. In many parts of the country, BLM lands provide the only available habitat. For example, 80 percent of all sage grouse spend their entire life cycle on BLM lands, as do most desert quail species. All told, BLM provides vital habitat for 23 species of upland birds. A strategy plan for managing BLM habitat for these species is nearing completion.

Enlisting the help of others is a top priority in BLM's efforts to improve the management of habitat for game birds. Cooperative projects with Pheasants Forever and Quail Unlimited and other interest groups are underway. BLM and the Idaho Department of Fish and Game have also embarked on a series of improvements, including coordinating habitat projects of mutual interest using funds generated from Idaho's upland game bird stamp.

California Bighorn Mugger (Continued)

California bighorn sheep were once plentiful in the high reaches of isolated canyons and cliffs in Nevada, California, Idaho and Oregon, but probably became extinct in those areas. Now their numbers are coming back, in no small part due to successful cooperative transplant programs involving BLM, state wildlife agencies, and in some areas, bighorn sheep interest groups.

Before Taylor begins his task of restraining and blindfolding the sheep — some of which can weigh 200 pounds and are known to have a mind of their own — a gunner in a lead helicopter has used a "net gun" to entangle the animal. The special gun fires a 10-foot square net over the bighorn, attempting to restrain or stop the animal.

"You want them to get tangled up in the net or catch the net in the brush," Taylor says. "Sometimes they're down when we (the muggers) get to them. If they're not, we stop them, then put a blindfold and hobbles on them. Once the blindfold is on, they settle right down."

All of this is done in the dead of winter. Body temperature of the bighorns is the key, making winter the best time of the year for the transplants. If the animal's temperature rises too much, it could be in danger, Taylor says.

So one of the first chores after the animal is subdued is to take its temperature and "if it's too high, we'll turn the sheep loose, right there."

The next step is for the bighorn to be put in a bag and attached to one of the helicopters. It's flown to a staging area, and then, in a specially equipped truck, driven to its new home and released.

"Releasing is the trickiest part. We want them to stay together in a band or at least in the same general area, but after all that's happened to them, sometimes they scatter like spit on a hot stove," Taylor says.

Survival rates are good, in the 90 percent range in Idaho. "The process isn't tricky, but it is sophisticated," Taylor says. And it can be dangerous.

"The helicopter is no more than 20 feet off the ground. It feels like the skid is right on top of the sheep. You look out of the open door and there they are," says Taylor. "It's cold and there's a 100 mile-an-hour downdraft from the helicopter."

Transplants are usually done in one long day. "It's really not that rough. Oh, you get your hands bloodied, but that's about all," says Taylor, who has 23 years experience working as a biologist from Texas to Alaska. "The only serious injury I've seen is some cracked ribs when a mugger fell down in the rocks while carrying a sheep.

"But it's nothing like tackling an elk," says Taylor, who has wrestled with his share of large animals in the wild during his career. "Now *that's* tough."

Goal 3 — Waterfowl Habitat Management

"Help perpetuate a diversity and abundance of waterfowl for the Nation by managing the wetlands and other habitats on the public lands that are of importance to the maintenance of this international resource."

The aim of BLM's waterfowl habitat management under "Fish and Wildlife 2000" could be summed in a few phrases — what's out there, how can we improve it, and how can we expand or add more of these vital habitat areas.

What's out there? Plenty. BLM manages more than 20 million acres of wetlands. A strategy plan in 1988 identified 225 key waterfowl areas on the public lands.

How can it be improved? We're working on several fronts. One is through an agreement with Ducks Unlimited (DU). Several joint habitat improvement projects are underway. In Montana and Alaska, BLM and DU are refining inventories of key waterfowl habitats. In Alaska, we've completed *five million acres* of inventory work. The two organizations are in the final stages of establishing a position in DU's Sacramento office to help identify and coordinate projects. BLM is also working with the U.S. Fish and Wildlife Service and others to expand our role in wetlands protection and implementation of the North American Waterfowl Management Plan. In many states BLM has cooperated with state

Nesting platforms at a heron rookery near Worland, Wyoming.

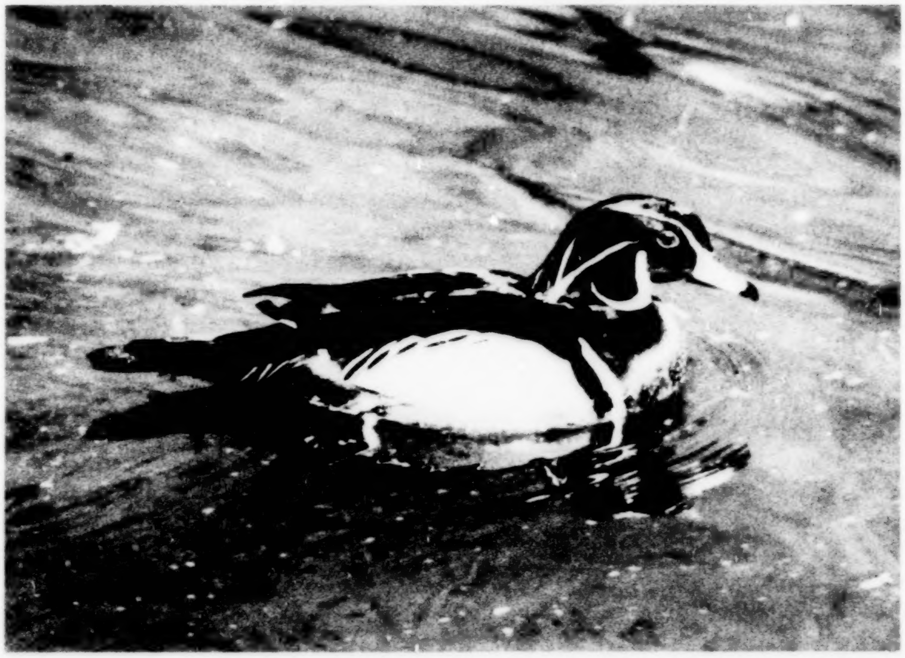
wildlife agencies to build and maintain hundreds of goose nesting platforms and nesting islands for other waterfowl.

Here are three more examples of what BLM is doing:

- *In Utah, control structures were repaired and maintained on 9,000 acres of the Pariette Waterfowl Management Area.*
- *BLM and DU finished the Custer Creek Reservoir in Montana, a 64-acre project with 1.5 miles of shoreline. Twenty-five acres of nesting cover was planted adjacent to the reservoir.*
- *In Rosebud and Custer counties in Montana, small nesting islands were created through use of explosives. Waterfowl and shorebirds are less vulnerable to predators on the island.*

Can more wetlands be added? BLM people think so. The agency objective is to acquire two million acres of wetland habitat within 97 waterfowl management areas through exchange, donation or purchase.

Some steps have already been taken. Outstanding wetlands in Oregon's Warner Valley and New River were acquired recently. Key wetlands in California along the Consumes River should soon come into public ownership. Building dikes and other water control structures in Colorado, Utah, Wyoming and Montana have created thousands of new acres of wetlands — much to the satisfaction of local waterfowl.



BLM manages more than 20 million acres of wetlands. Through donations, exchanges and purchases, the agency hopes to add two million more acres.

Nesting structure at the Pariette Wetlands Riparian Area, in BLM's Vernal (Utah) District.

Goal 4 — Raptor Habitat

"Provide suitable habitat conditions for birds of prey on public lands through the conservation and management of essential habitat components, including habitat for prey species, especially in areas where birds of prey concentrate during some period of the year, or in important habitats where populations are supressed."

They soar gracefully above the rangeland, or ride the wind currents high over the rimrock and canyon country. They dive fearlessly, attacking prey in the air, on the water, or on the ground. They are among the most beautiful, graceful, and fierce of all creatures. They are the birds of prey, or raptors.

Raptors represent nature in the rough — and there is no better place for nature to show them off than the canyons, cliffs and open spaces managed by BLM.

The goal for raptors in "Fish and Wildlife 2000" is straightforward. It is to provide suitable habitat for birds of prey on public lands. A strategy plan approved by BLM in 1989 identifies 223 key raptor areas encompassing 13.5 million acres of public land. These areas are widely scattered and contain a wide range of features. Protecting these special habitats through BLM's planning system will be a key to maintaining populations of the 45 raptor species found on public lands in the west.

BLM is also concerned with maintaining populations of prey species; without the prey there soon could be no birds of prey. Managing all the components of raptor habitat is an essential step that BLM is taking.

Dizzy Dean, the legendary baseball pitcher, once said, "If it's true it ain't braggin." With that in mind, BLM is *the* agency source for raptor information and research. That leadership role was enhanced in the spring of 1990

Barn owls' keen hearing allows them to locate prey on the darkest of nights.

when the Raptor Research and Technical Assistance Center (RRTAC) was founded in Boise, Idaho. BLM worked with Boise State University, The Peregrine Fund, the Idaho Department of Fish and Game, the U.S. Fish and Wildlife Service, and other public and private groups to establish the center. RRTAC will further enable BLM to conduct and coordinate research and provide management and technical assistance to other BLM offices, other agencies and interested groups throughout the nation.

Birds of prey are found throughout the world, from seaside forests to desert mountain ranges. BLM is fortunate to have some of the best raptor habitat in the world — and under the direction of "Fish and Wildlife 2000," will keep it that way.

Mike Kochert of the BLM's new Raptor Research and Technical Assistance Center in Boise, Idaho, gathers data for a ferruginous hawk study.

Peregrine falcons "imprint" at hack sites, so that they'll return to nest. This hack site is at Twin Mountain, in Colorado.

Goal 5 — Riparian Management

"Manage riparian areas to achieve a healthy and productive condition for long-term benefits and values, in concert with the range and watershed programs."

Acre for acre, riparian areas — the bands of green near streams, springs, lakes and other sources of water — are the most important lands managed by BLM.

In some places, upwards of 80 percent of wildlife depend on riparian areas to supply water, food, shelter and other life-giving needs. Healthy riparian areas usually mean healthy wildlife populations and fish habitat. They also mean improved soil stability, water quality, more recreation opportunities and increased forage for livestock as well as wildlife.

That's a fact BLM recognizes. In "Fish and Wildlife 2000," the goal is to manage riparian areas for their long-term health and productivity.

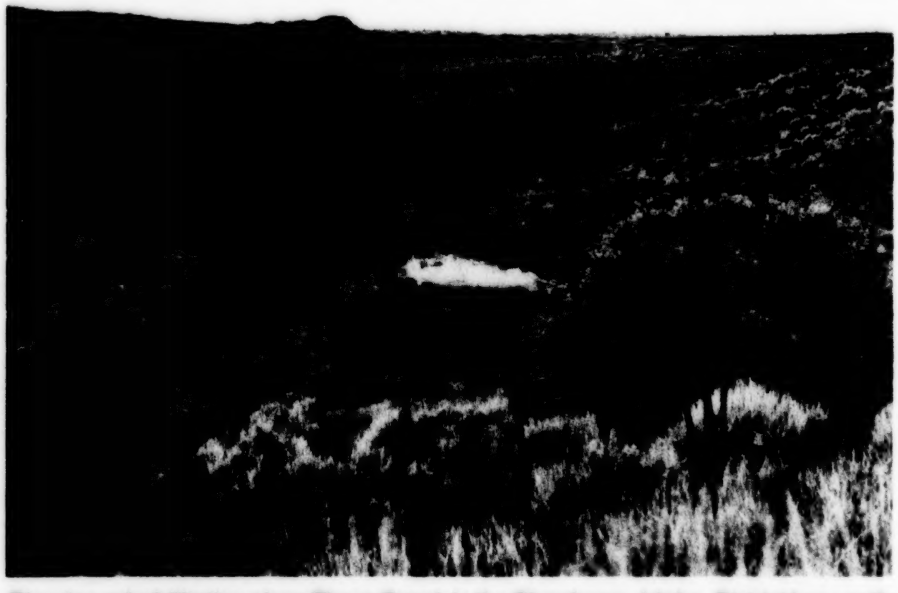
Cattails, framed against the winter sun, Pariette Wetlands Riparian Area in Utah.

A sampler of what BLM is doing for riparian management looks like this:

- *One of the specific objectives in "Fish and Wildlife 2000" is to bring 75 percent of our riparian areas into good or better ecological condition by 1997.*
- *To assist with that objective, total riparian funding increased to $8.1 million in 1990, split between wildlife and range.*
- *Each BLM office is developing at least one riparian showcase area, where practices that benefit riparian areas are featured. The success of the effort was illustrated in 1988 when the American Fisheries Society's Western Division picked 20 BLM riparian improvement projects as winners in its "Riparian Excellence" program.*
- *In Idaho, more than 200 riparian projects are in place. Livestockmen, conservationists and others have praised BLM for the effort.*
- *In California, 30 volunteers planted 10,000 willows, 3,000 aspens, and 200 cottonwoods within the Cedar Creek riparian area. And that's just the start. Other projects are planned by BLM and cooperators for the area in the next few years.*

Riparian improvement work will be at the top of the list for BLM managers over the next few years. In many cases, these lands have been damaged over many years. Now, they are being healed, and fish and wildlife will be among the benefactors of their recovery.

Cottonwoods line riparian areas along the San Pedro River, in BLM's Safford, Arizona, District.



Riparian rehabilitation along Thorn Creek in the Shoshone, Idaho, District has vastly improved wildlife habitat in a desert setting.

Fisheries Management Component

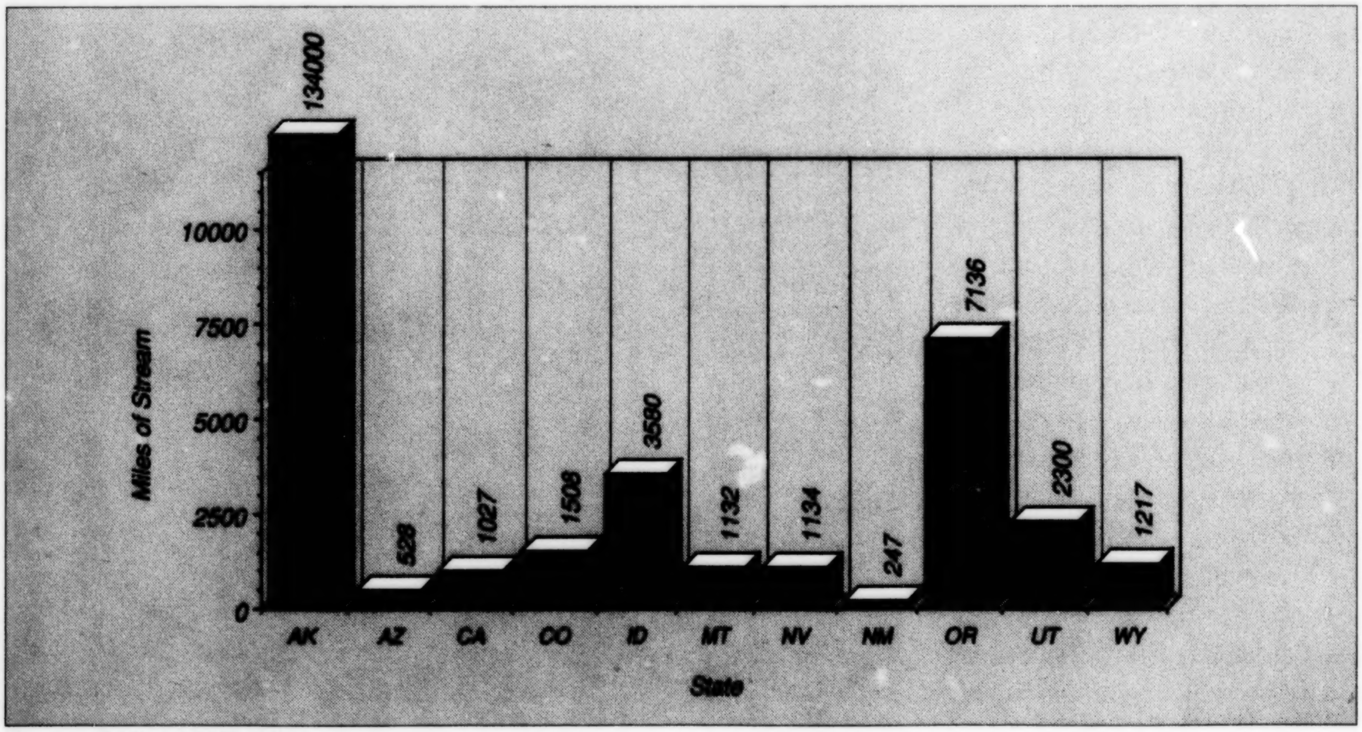
Cutthroat. Rainbow. Chinook. Largemouth bass. All kinds of fish, all found on public lands.

BLM boasts some pretty impressive numbers when it comes to fish habitat. We manage 155,000 miles of stream fish habitat, 4,000,000 acres of lakes and 192,000 acres of reservoirs. In the Pacific Northwest, 13,000 miles of BLM-managed streams are vital to runs of salmon and trout, as are more than 100,000 miles of stream in Alaska. In the southwest, BLM waters feature species such as bass, catfish and pupfish. And some of the small desert ponds and springs harbor populations of fish species found nowhere else in the world.

In BLM's fiscal year 1989, $1.6 million was spent on fisheries. That was up by 23 percent from the previous year, but still falls short of what is needed for an effective Bureauwide program. Until the fisheries program receives equal consideration with other resources and more funding, it is in danger of languishing.

That was one conclusion of a report completed in January 1989. It was written by a team of BLM biologists, managers, state fish and wildlife department directors and the deputy director of the American Fisheries Society. It recommended that funding and staffing be increased for the fisheries program, and warned that major strides couldn't be made until the

Miles of Fishable Stream on BLM Land by State.



Source: Public Land Statistics.

situation was corrected. As an example, there is a funding backlog of $26.7 million to put into effect existing fisheries HMPs.

BLM's national director endorsed the report and began work to reverse the downward trends in funding and employment. No one expects miracles. Without significant additional funding and positions, it will be years before the fisheries program rebounds.

"Fish and Wildlife 2000" targets working cooperatively with states and private interests, and identifying and improving habitats for high-value species as its main goals. Despite the funding and staffing shortages, there are good fish tales to tell about progress for both anadromous and resident fisheries on the public lands.

On the Susan River in California, an abandoned railroad grade was converted to a scenic mountain bike and walking trail, providing access for fishing along the entire river. The Havasu Bass Club in Arizona placed cover structures in a lake to improve fishing and protect riparian habitat. Two rearing channels on the American River in Idaho were developed. In the coastal foothills of Oregon, 110 miles of excellent habitat was opened to anadromous runs when a series of fish passages and side channels was constructed around a waterfall. Alaska BLMers began work outlined in the Norton Sound HMP, including restoration of five species of Pacific salmon; and started efforts to restore the northernmost run of steelhead in North America.

A couple of more notes:

BLM finished a strategy plan, "Anadromous Fish Habitat Management on Public Lands," in 1988. It outlines an ambitious 12-year program, that if fully funded, will increase production of adult salmon and steelhead by about 172,000 fish annually in Idaho, Oregon, California and Alaska, with a return of $2.50 for every dollar invested.

Resident species aren't left out of "Fish and Wildlife 2000." The assortment of habitats is remarkable. Springs and small ponds on deserts below sea level mark one end of the habitat range; alpine lakes in Idaho are on the other. The only known populations of some fish species may be in a small pond on isolated BLM lands. BLM's goal is to keep these diverse habitats healthy and producing, no matter their size or use.

There was a time when fish seemed to just take care of themselves. The anadromous runs always took place and the fishing hole always had a supply of hungry fish to take a look at a worm or fly. In most areas, that's no longer the case, and the actions taken by BLM over the next few years will be critical to the future of fish on the public lands.

Landing a cutthroat, South Fork Snake River, Idaho Falls District.

"Sixty-Nine Hands"

Neil Armantrout remembers the first time he really thought a fish passage around Lake Creek Falls would happen.

It was at a public meeting in the small town of Triangle Lake, Oregon, three years ago. Seventy people had shown up to hear about BLM's proposal to provide passage for anadromous fish around a waterfall and bedrock sheet that blocked more than 100 miles of habitat. The turnout for the meeting wasn't bad, Armantrout thought, considering it represented about half the area's adult population.

After two hours of explaining the proposal and answering questions, Armantrout, the district fisheries biologist, and the other BLM employee with him, asked for a show of hands supporting the passage. Sixty-nine hands shot up.

"And the one person who didn't raise his hand didn't really oppose it, he was just worried about his favorite swimming hole," Armantrout said.

"We'd been saying all along that we wouldn't proceed with the project unless the community supported it," Armantrout recalls. "That night, we learned that public support wasn't going to be a problem."

Public support became the key to completing the project, in fact. Local citizens worked closely with the state fish and game commission to obtain approval for the passage project. Elected officials, from state legislators to the Oregon Congressional delegation, backed the project. A local utility company donated some of the materials and cooperated on access. The Emerald Chapter of the Northwest Steelheaders agreed to do the maintenance work on the state-of-the-art passage around Lake Creek Falls.

The list of contributions from public and private entities went on and on — right down to the dedication ceremony at the project's completion in 1989, when the local grange hosted a fried chicken luncheon for almost 100 people.

Side channel structure (on left) allows anadromous fish to bypass bedrock area on Lake Creek in the Eugene, Oregon, District.

Best of all, the passage showed signs of use by migrating fish the first winter after its construction, two or three years earlier than expected.

And the project left an indelible impression on those who worked on it. "This is a dramatic example of cooperation between government and private organizations," praised one Congressman at the dedication.

"It shows how much the public wants fish habitat improvement work, and how people are willing to pitch in and help," says Armantrout. "Everybody wins on a project like this."

Threatened and Endangered Species Component

Back in 1936, a husky boatman by the name of Ed MacFarlane rowed two botanists from Harvard University down the Snake River in southern Idaho. MacFarlane was eager to show them a small, brushy plant with magenta flowers, a plant that didn't seem to grow anywhere else, he thought.

MacFarlane was right. The plant was a new discovery and the botanists honored the boatman by naming it MacFarlane's four o'clock *(Mirabilis macfarlanei).*

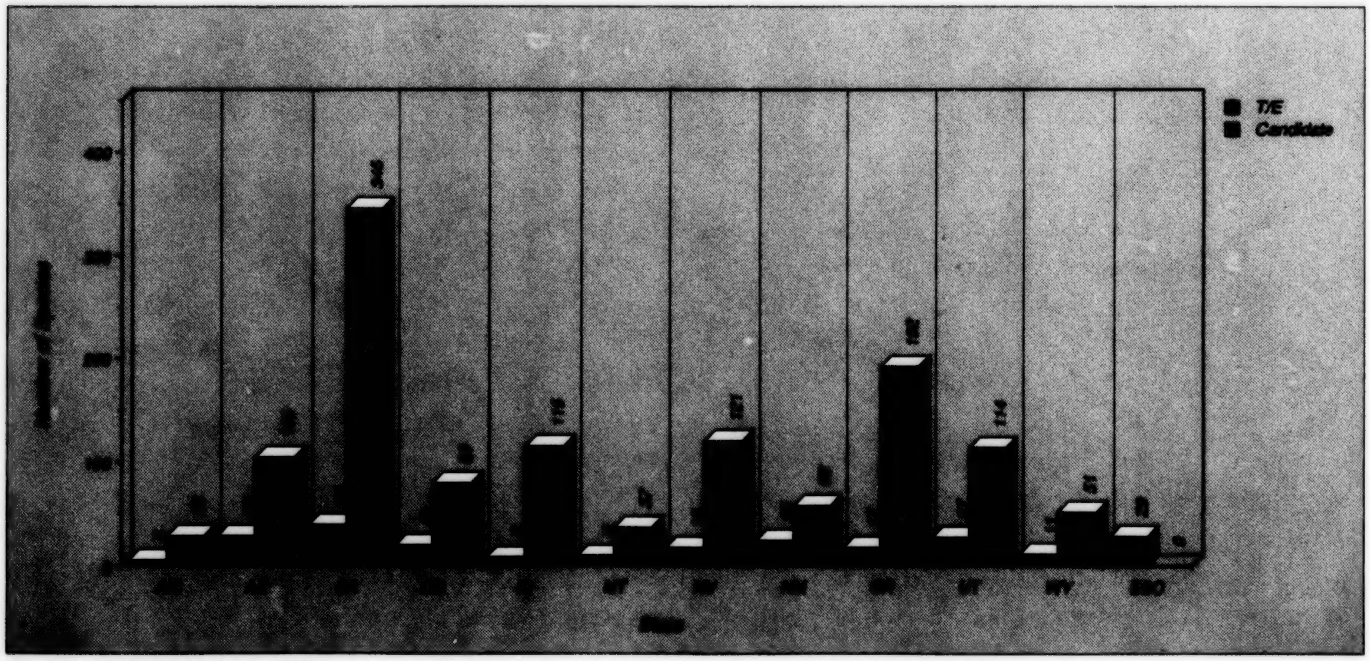
But the plant didn't stand well against time. Ground squirrels could make the plant's thick root into a series of satisfying meals. A succession of hard winters may have also taken a toll. Forty years after it was discovered, the plant named for Ed MacFarlane was listed as an endangered species.

MacFarlane's four o'clock is one of 152 federally listed threatened or endangered species on public lands today. That number includes 99 animal species and 53 plant species. Another 876 plant species and 250 animals are candidates for listing.

BLM's goals for threatened and endangered species are outlined clearly in "Fish and Wildlife 2000." Populations of those species will be increased to historic levels, consistent with BLM land use plans.

Available funds are spent on species that present special problems or seriously affect other resources. The desert tortoise and northern spotted owl are two examples.

Threatened, Endangered and Candidate Species by State (Fiscal Year 1989).



Source: BLM Washington Office

Threatened and Endangered — More Listings, More Controversy

With more than 1,100 candidate species of plants and animals, the Threatened and Endangered (T&E) Species list may expand rapidly over the next few years. And T/E species can be among the thorniest of all BLM issues, as witnessed by controversies surrounding the northern spotted owl and desert tortoise.

"There's explosive growth potential," says one BLM state office T&E coordinator, "and with that is going to come controversy."

From tiny tiger beetles that inhabit only a few sand dunes in southeastern Idaho to the grizzly bear in the Rocky Mountains, the work load is tremendous. But there is progress to report.

Take the black-footed ferret. Four BLM states — Utah, Montana, Colorado and Wyoming — are looking for sites suitable for North America's most endangered mammal. A captive breeding program in Wyoming has been successful, and may pave the way for reintroduction in 1991.

Along the Colorado River and its tributaries, BLM teams are searching for an endangered bird species, the Yuma clapper rail. Each spring, a count is made to determine how many breeding pairs are in the wild. That information is vital for biologists to plot strategies for recovery.

Peregrine falcons, once on the brink of extinction, are a true BLM success story. This magnificent bird of prey, which can reach speeds of almost 200 mile an hour, had disappeared from much of its historical range after widespread use of the pesticide DDT caused a fatal thinning of egg shells. From Alaska to the Mexican border, BLM cooperated with The Peregrine Fund and other state and federal agencies to survey habitat, construct hack boxes and monitor the birds to determine survival rates and their overall health. Now the birds are nearing recovery goals in Arizona and Colorado, and may be delisted in the near future. In Montana and Idaho, they've again begun to nest naturally.

In California, BLM added 24,300 acres to the Carrizo Plain Natural Area, which was established to protect habitat for three endangered animals and three sensitive plant species. The reserve now contains about 180,000 acres.

And in Idaho, were he still around, Ed Macfarlane would be smiling. His discovery, the magenta-flowered Macfarlane's four o'clock, was successfully transplanted by BLM to two other sites in Idaho last year, far away from the nearest ground squirrel.

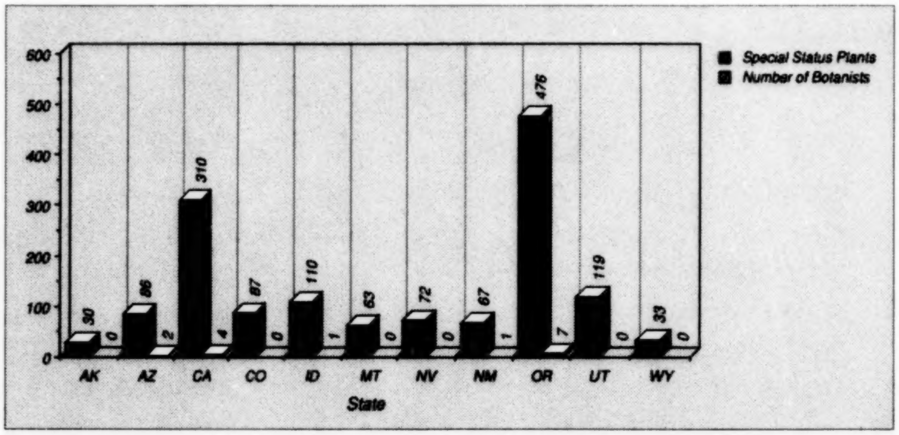
Macfarlane's four o'clock, an endangered plant, has been successfully transplanted to two new sites.

Special Status Plants

Botanists have been hired in several states. They'll spend much of their time inventorying and monitoring rare, threatened and endangered plants, and providing information about actions that affect those species. An interdisciplinary team for threatened, endangered and candidate plants is producing a strategy plan for managing these species — no small task given the 900-plus plants in those categories.

California, Colorado, New Mexico and Nevada participated in cooperative inventory projects with several groups during the year. The Nature Conservancy participated with BLM on inventories in several states.

Special Status Plants Versus Botanists by State.



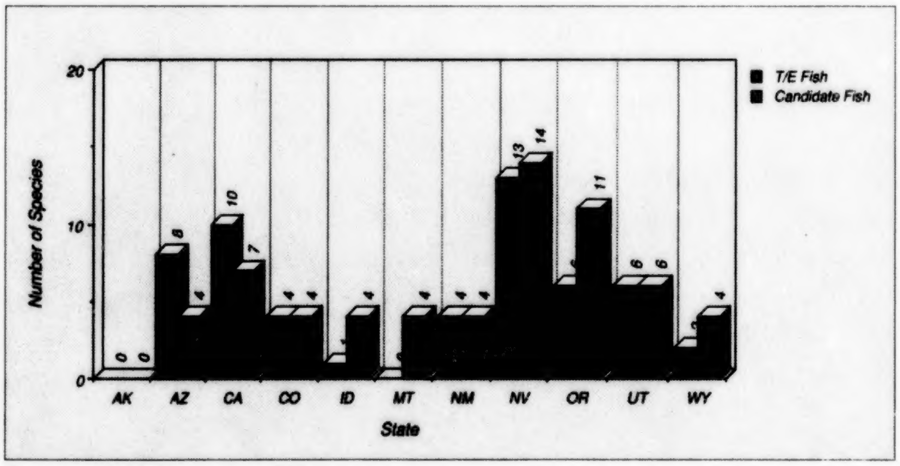
Source: Wildlife personnel data base.

Special Status Plants include T/E, Candidate, and State Sensitive.

Threatened and Endangered Fish

BLM manages habitat for 100 species of fish listed as threatened or endangered. A national strategy plan for managing these and candidate species also will be completed late in 1990.

T/E Candidate Fish on Public Lands (Fiscal Year 1989).



Source: BLM Washington Office.

Partnerships

We can't do it alone. The goals outlined in "Fish and Wildlife 2000" are just too sweeping for BLM to achieve without outside help.

So we've come to rely on others. And it seems to be working well.

Since "Fish and Wildlife 2000" was approved, BLM has strengthened its traditional ties with state fish and wildlife agencies, other federal agencies, and opened the door to new organizations, inviting them in to lend a hand to a cause they're interested in. National level agreements have been signed with a dozen organizations in the last 18 months. And we expect more.

These agreements are fostering dozens of projects on-the-ground to improve habitat and to otherwise benefit fish and wildlife resource management.

We call all of this "partnerships." We're working with our partners in many ways. One of the best is a program called "challenge cost share," where we put up project money and other agencies, organizations or even individuals donate matching funds or supply material or labor. It's a program that works. In 1986, Congress appropriated $300,000 for it. In 1990, the sum reached $2 million, to fund 60 of 208 proposed projects.

Our partnerships and team efforts toward improving wildlife and fish habitat may, in fact, be the most outstanding facet of "Fish and Wildlife 2000." Here are just a few examples of the kinds of good work BLM and our partners are doing.

- *Two hundred cottonwood poles were planted along an abandoned agricultural lease on the Colorado River in Arizona. The work was done by BLM and the Izaak Walton League Riparian Enhancement Team, and will improve riparian habitat.*
- *In California, the Plumas National Forest, the Organized Sportsmen of Lassen County, the California Correctional Center and BLM joined forces to plant 44,300 bitterbrush seedlings to help restore mule deer winter ranges lost to wildfire.*
- *Artificial nesting and rearing sites (called "hacks") were constructed in Colorado by BLM, the Colorado Department of Wildlife and The Peregrine Fund. Young birds are fed in the structures and allowed to fledge so they will "imprint" and return to the site to nest.*
- *Bald eagles are the subject of a study to document home ranges*

Organizations that BLM now has National Agreements with.

Center for Plant Conservation
Ducks Unlimited
Foundation for North American Wild Sheep
Mule Deer Foundation
National Rifle Association
National Wild Turkey Federation
Pheasants Forever
Quail Unlimited
Rocky Mountain Elk Foundation
The Nature Conservancy
Times-Mirror Magazines Conservation Council
Trout Unlimited

"If You Want to Help"

Wildlife biologist Bill Merhege of the Las Cruces, New Mexico, District is quick to point out two things about the spring-fed riparian areas in the Placitas Arroyo Allotment.

One, work on restoring the riparian area isn't done, and may not be for several years more. Two, the transition back to a healthy habitat wouldn't be possible without the help of some very good partnerships.

Five years ago, "healthy" would have been one of the last adjectives to describe the area about 40 miles north of Las Cruces. Invading non-native species were taking over the site and when it rained, "The drainages would fill up, with a channel 20 to 30 feet wide," reports Merhege. "It would scour out all the vegetation and leave behind what amounted to a large sandbox." Vegetation was in poor condition due to years of overgrazing by former permit holders.

So it was only natural to point several groups to the area when BLM was asked if any work needed to be done. "We told them, 'If you want to help us, this is how you can,'" Merhege says.

The interested groups — the New Mexico State University Chapter of The Wildlife Society, the Hatch Chapter of the Future Farmers of America and the Southwest New Mexico Chapter of Quail Unlimited — went to work.

The groups all had a hand in constructing exclosures around portions of the riparian area. They planted native trees and shrubs — cottonwoods, willows, mesquite, squawberry, tornillo and others. Quail Unlimited volunteered to hand water the plants away from the springs during the steamy months of May and June. The permittees in the area when the work started, Mr. and Mrs. Stanley Adams, "have also been very

"The potential for this kind of work is unlimited," says wildlife biologist Bill Merhege, about the new interest in natural resource volunteerism.

and winter movements in southeastern Idaho. BLM is working with Montana State University, the Northern Rockies Conservation Cooperative, the Landmark Foundation and other volunteers to determine habitat components and the effects of humans on nesting birds.

- *A 64-acre reservoir near Miles City, Montana, was revived when a dam that had failed in the 1940s was rebuilt. The project will restore excellent waterfowl habitat. Ducks Unlimited, a local rancher and BLM worked together on the reconstruction.*
- *The Rio Puerco Resource Area in the Albuquerque District challenged The Rocky Mountain Elk Foundation to help them finance a water source on La Ventana Mesa. The challenge was met. A catchment with a 5,000-gallon storage tank was installed.*
- *The Carson City, Nevada, District cooperated with Nevada Bighorns Unlimited and Corona Gold Mines, Inc., to install two water projects for desert bighorn sheep.*
- *Three miles west of Eugene, Oregon, prescribed fires were set to clear invading brush species off native prairie where an endangered species, Bradshaw's lomatium, is found. Cooperators included BLM, the U.S. Army Corps of Engineers, The Nature Conservancy and Oregon State University.*
- *Eleven potholes were blasted in the Blue Springs area north of the Great Salt Lake in Utah. The project improved habitat for waterfowl and shorebirds. The blasting was done by BLM and the Utah Division of Wildlife Resources.*
- *BLM, Sweetwater Wildlife Association and the Wyoming Game and Fish Department have cooperatively restored Bone Draw to a perennial stream complete with a gabion, riparian vegetation and log sills. Trout Unlimited planted over 1.3 million fish, and the hatching success rate averages 95 percent.*

The list could go on because there are hundreds of partnership projects underway throughout BLM. Partnerships are a good way for BLM to stretch our resources, and at the same time, bring the public back into public lands management.

cooperative. They were really interested in helping out the resource," Merhege says.

Already, some changes are apparent. The plantings help the area to look better, and because the riparian area retains more water now, natural vegetation is moving in. When it rains, the channels are now 8 to 10 feet wide, with little evidence of scouring.

"It's still going on, it's not a finished project," Merhege adds. "Someday, I expect to look back and see even more real changes."

Placitas Arroyo is a success story within a success story. It's representative of the new attitude of natural resource volunteerism. Ten years ago, the kind of cooperation and effort at Placitas Arroyo wouldn't have happened, Merhege believes.

"The potential for this kind of work is unlimited, especially with the increased awareness about protecting the environment," says Merhege, who credits area manager Tim Salt and resources chief Scott Florence with encouraging volunteer work and partnerships in the Mimbres Resource Area.

"We have people coming in all the time now asking what they can do. One of our biggest problems lately is finding enough work for all of them."

Which is the kind of problem that most BLM managers don't mind dealing with at all.

Budget and Staffing Progress

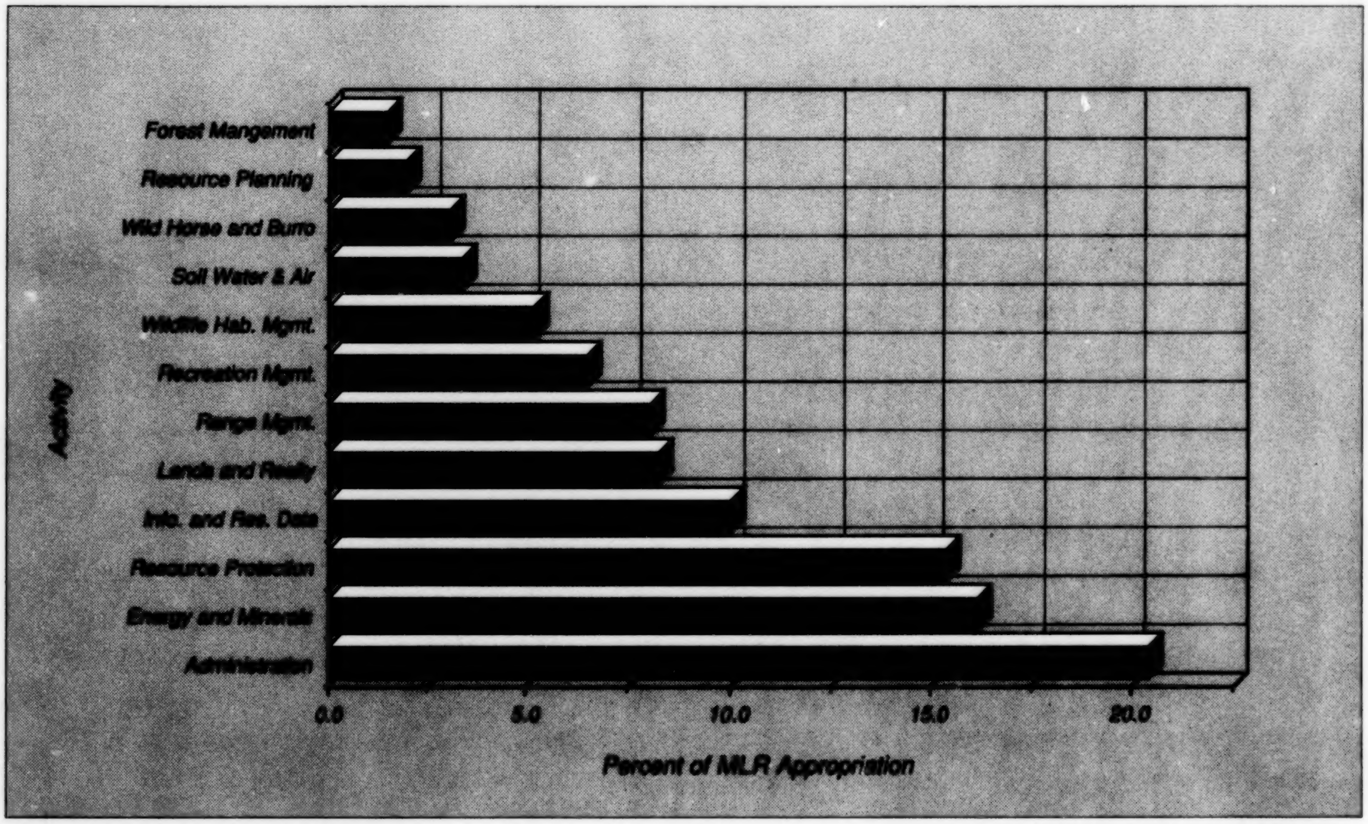
Budget

Since "Fish and Wildlife 2000" was completed, the budget for the program increased from $16.3 million to $22.9 million. In FY 1990, that was 5.2 percent of the funds appropriated to BLM under the category of "Management of Lands and Resources."

Of the $22.9 million allocated for fish and wildlife habitat management in FY 1990, $13.9 million was budgeted for wildlife and fish habitat management, with $4.1 million for threatened and endangered species.

The graphs on page 26 show expenditures for fish and wildlife habitat management and for T/E species management components. As "Fish and Wildlife 2000" is further implemented, on-the-ground activity expenditures are expected to increase.

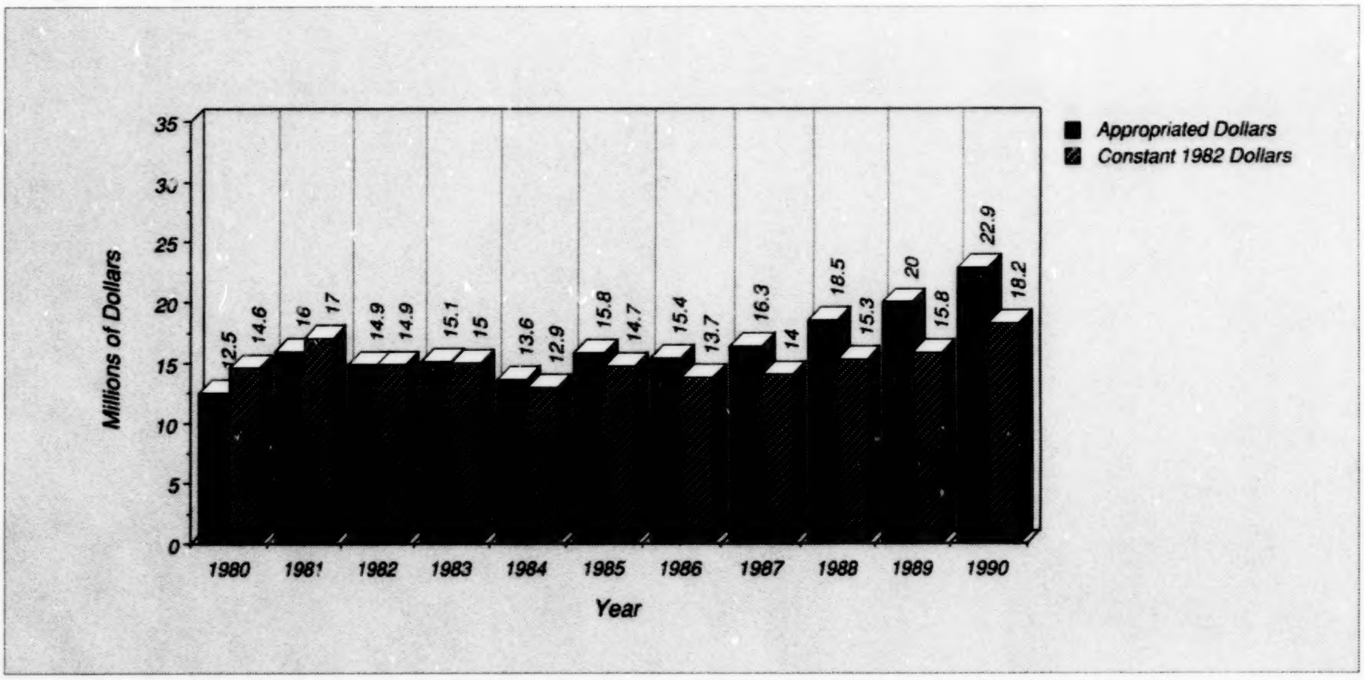
Fund Distribution for Management of Lands and Resources (Fiscal Year 1990).



Source: Fiscal year 1990 BLM Appropration.

MLR funding level: $442 million.

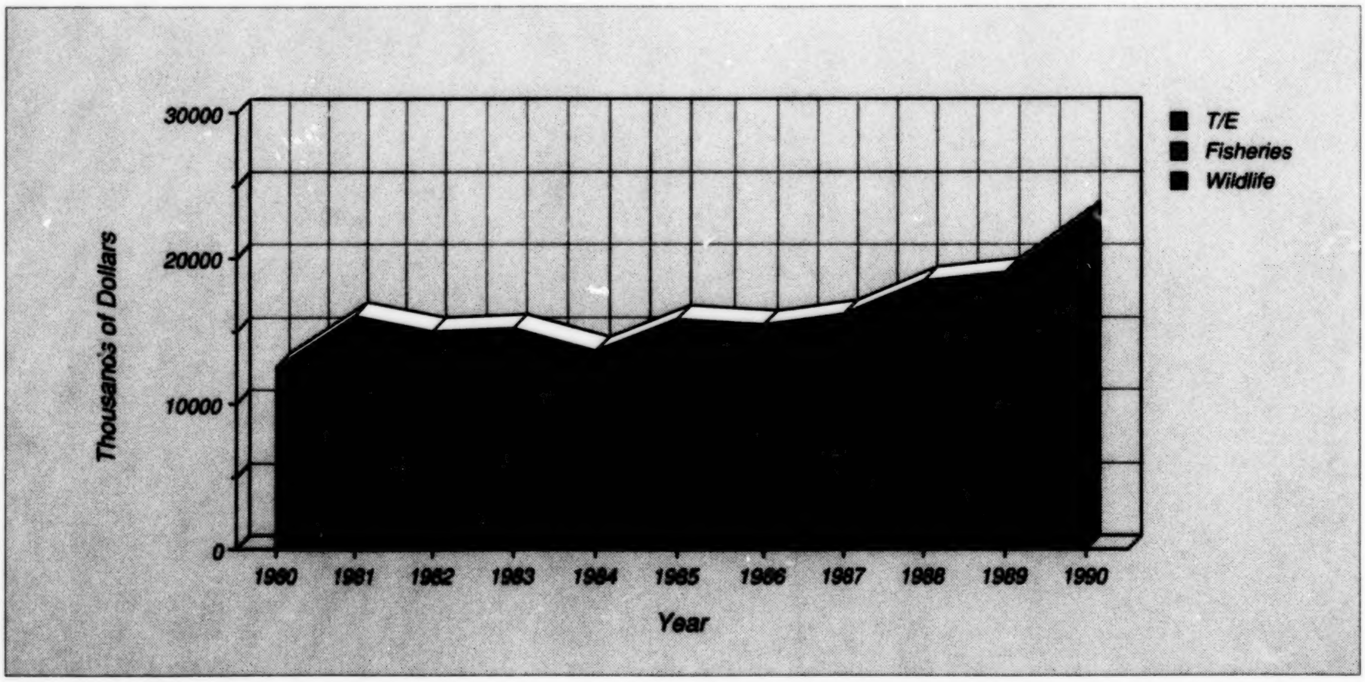
Budget History for Wildlife and Fisheries.



Source: Administration's Budget and Congressional Appropriations.

"Constant 1982 Dollars" are determined using the President's annual economic indicators, with 1982 equal to 100 percent.

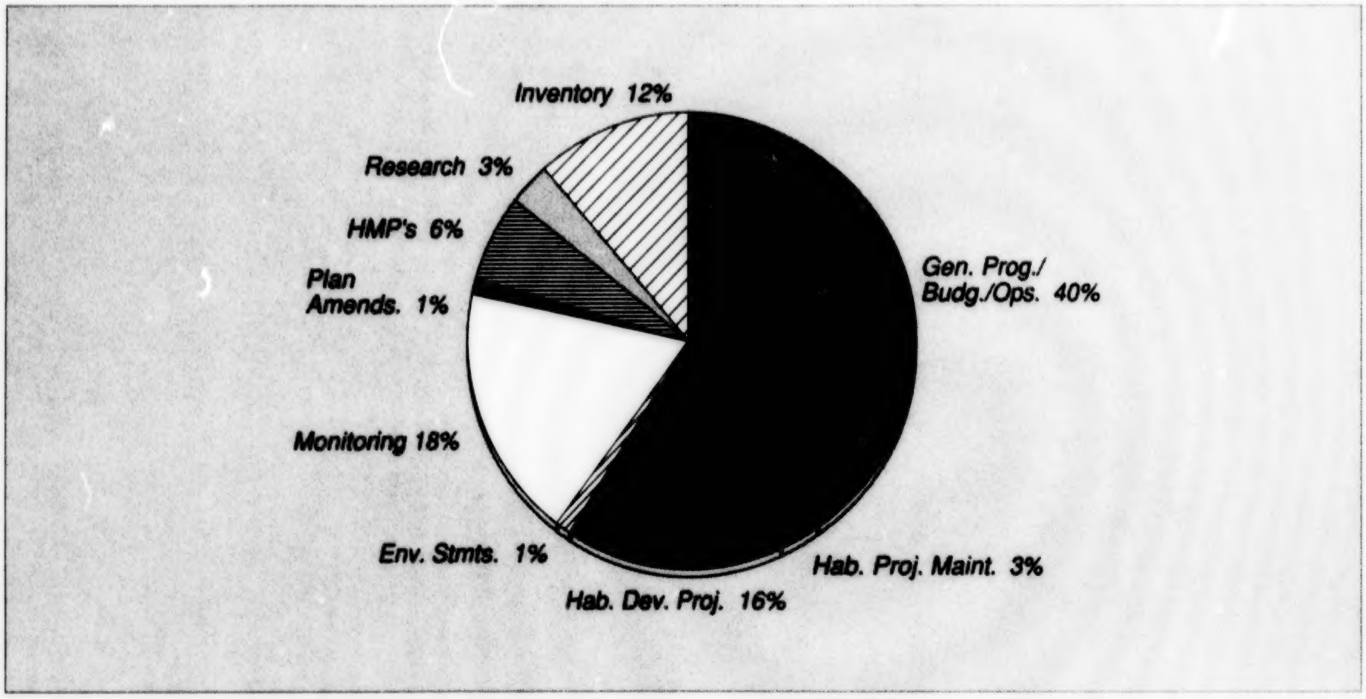
Budget History by Program Component.



Source: BLM Annual Work Plan

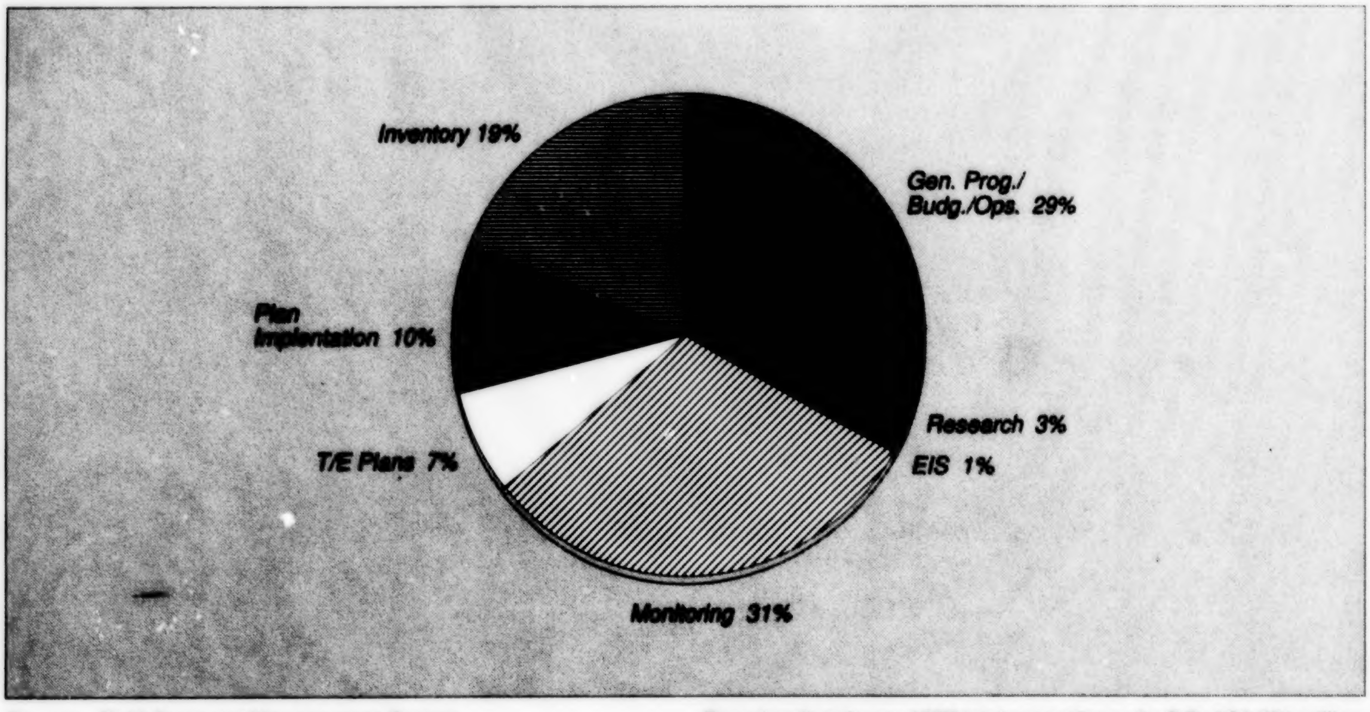
Fisheries funding is not tracked separately in the Financial Management System. Figures are estimates only.

Expenditures by Program Element for Wildlife and Fish Habitat Management.



Source: BLM Financial Management System End-of-Year Report. *Expenditures based on fiscal year 1989 budget of $13.936 million for 4351.*

Fiscal Year 1989 Expenditures for Threatened and Endangered Species.



Source: BLM Financial Management System. *Based on fiscal year 1989 total expenditures for T/E of $4.071 million.*

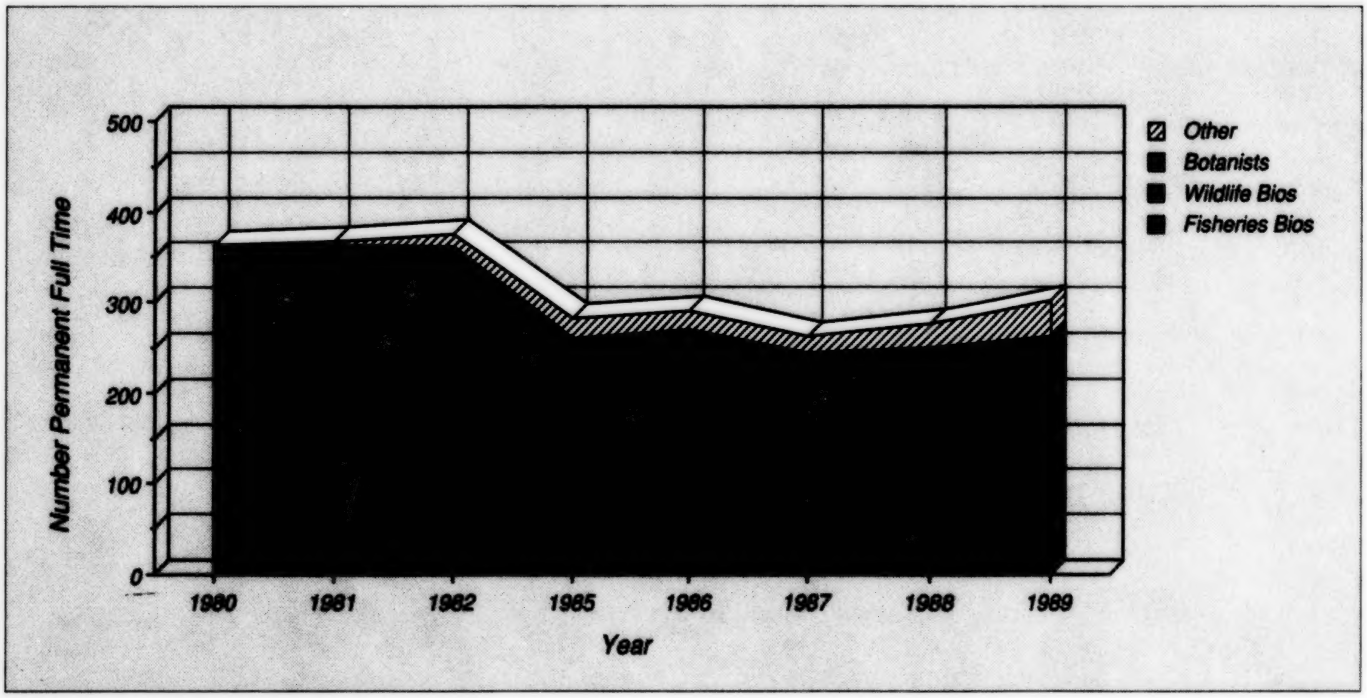
Staffing

The influence of "Fish and Wildlife 2000" is being felt in staffing. In the last three years, hiring in key wildlife, fisheries and botany positions has been on the upswing.

More than 90 percent of the program personnel employed by BLM are located at the district and area office level.

BLM wildlife biologist Steve Langenstein makes dozens of presentations about raptors each year.

Staffing History.



Source: Wildlife personnel data base.

Needs — What It Takes to Make It All Work

"Fish and Wildlife 2000" may be a vision, but it has its roots in reality. The plan doesn't come free. The commitment to make it work is in place. The timing is right. With the proper support, "Fish and Wildlife 2000" *will* continue to make a difference.

BLM's 1990 budget is about one-third the amount needed to effectively implement the plan.

The table below shows current and target staffing levels. Total projected implementation cost over the next decade is about $567 million.

BLM can promise results with adequate funding:

- *Improved fishing, hunting and wildlife viewing opportunties.*
- *Better access to public lands.*
- *Faster recovery of threatened and endangered species.*
- *Preventing the need for listing of some candidate threatened and endangered species through proactive management.*
- *Increased economic benefits to local communities.*
- *Sustained viability of recreationally important species.*
- *Enhanced recovery of riparian, stream and wetland habitats.*
- *Expanded partnerships and contributions from outside sources.*

Current and Target Staffing Levels for BLM Wildlife and Fisheries Related Scientists.

	Wildlife		**Fisheries**		**Botanists**		**Other**		**Totals**	
Office	**Current**	**Target**	**Current**	**Target**	**Current**	**Target**	**Current**	**Target**	**Current**	**Target**
AK	6	39	6	39	0	6	0	23	12	107
AZ	22	39	1	6	1	8	0	39	24	92
CA	27	46	2	11	4	20	0	41	33	118
CO	15	30	2	9	0	5	0	31	17	75
ID	25	47	3	10	1	15	0	40	29	112
MT	17	26	1	7	1	8	0	30	19	71
NV	19	47	2	12	0	8	0	30	21	97
NM	14	26	0	1	2	5	0	14	16	46
OR	33	60	13	32	9	36	2	68	57	196
UT	22	34	2	5	1	12	0	39	25	90
WY	19	44	2	5	0	5	0	28	21	82
ESO	2	0	0	0	0	0	1	0	3	0
WO	6	9	1	2	0	1	2	7	9	19
PTC	2	4	0	1	0	0	0	0	2	5
SC	3	11	1	2	1	2	0	10	5	25
Totals	**232**	**462**	**36**	**142**	**20**	**131**	**5**	**400**	**293**	**1,135**

A Final Look

"Fish and Wildlife 2000." A new era starts at BLM.

An overstatement?

No.

"Fish and Wildlife 2000" has helped to usher a new attitude about these valuable resources and the way we manage them. And it's a tangible change. The dozens of plans and on-the-ground projects spawned by "Fish and Wildlife 2000" mentioned in this report represent only a sliver of all that has been accomplished since the plan was published in 1987 and implemented the following year.

And we look to accomplish even more in the future. It will take our best effort, plus the support of Congress and our hundreds of partners to make "Fish and Wildlife 2000" happen, but we believe it will happen.

Our fish and wildlife resources on the public lands deserve no less.

Access trail, built through the challenge cost share program by BLM and local sportsmen at Sawmill Gulch in Montana.

Mule deer in the sagebrush and pinyon juniper country of Utah's Henry Mountains, near Richfield.

END

11—11—91